

HereLink Blue Ground Station Labeled

Feature	Specification
1) Upper Left Wheel:	Control gimbal (configurable)
2) Upper Right Button:	Take photo (configurable)
3) Button A:	Configurable
4) Button B:	Configurable
5) Power Button:	Power on/off and unlock screen
6) Home Button:	Return to Land options (configurable)
7) Button C:	Configurable
8) Button D:	Configurable
9) Micro USB	Charge battery/connect to computer

Ground Station LED (Left)

Feature	Specification
Flashing Red Light:	Critical battery power

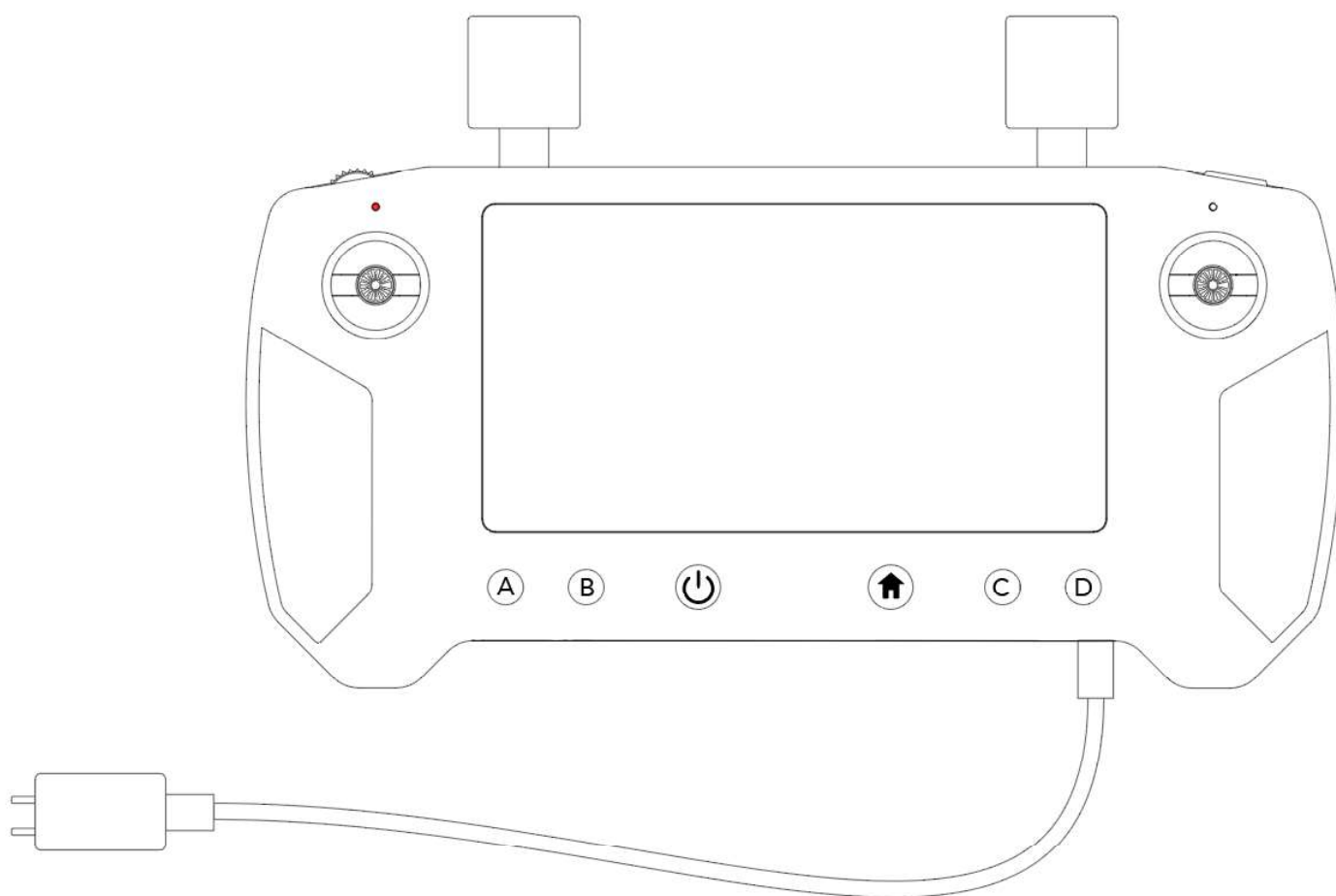
Steady Red Light:	Low battery power
Steady Yellow Light:	Medium battery power
Steady Green Light:	Sufficient battery power

Ground Station Charging

To charge the Ground Station, connect a USB to micro USB cable to the USB port on the side of the charge and to the micro USB port located on the bottom of the radio controller.

When charging, the charging indicator LED will turn red, and when charging is complete, the indicator will turn green.

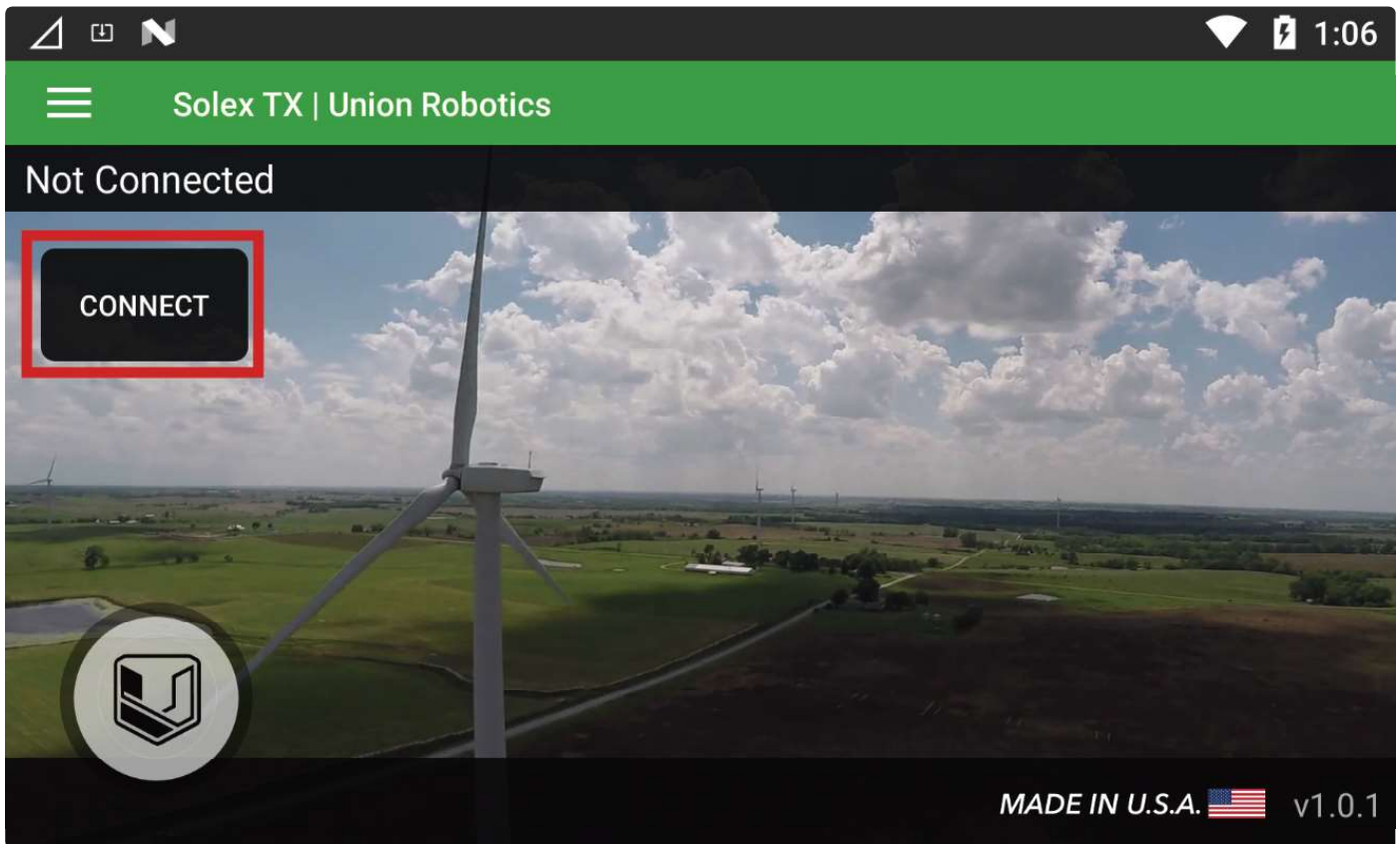
Charge with 5V 2A



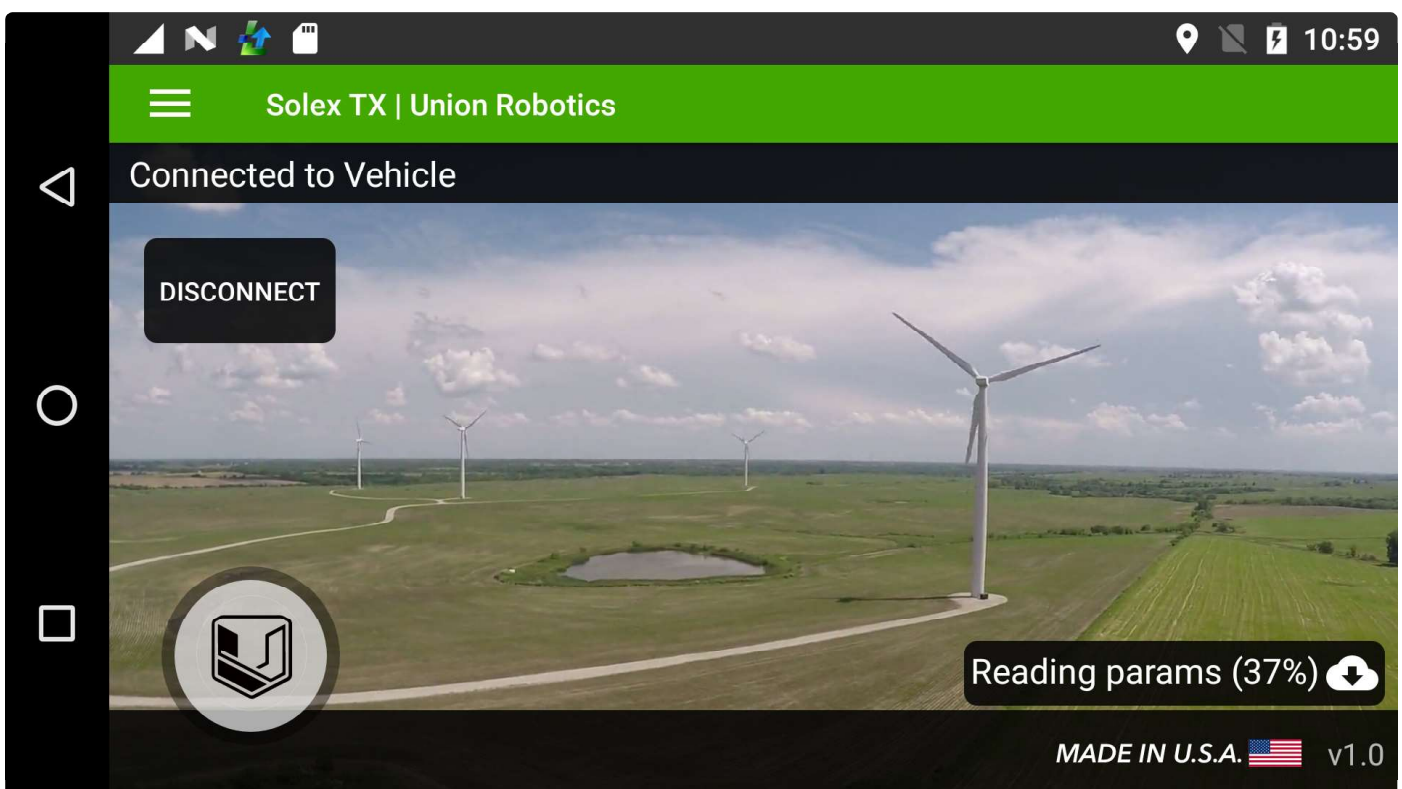
UR/Solex TX App

Connecting the Ground Station to the Air Unit

If the Ground Station and Air Unit link does not automatically connect, press the **CONNECT** button on the left hand side of the display screen.

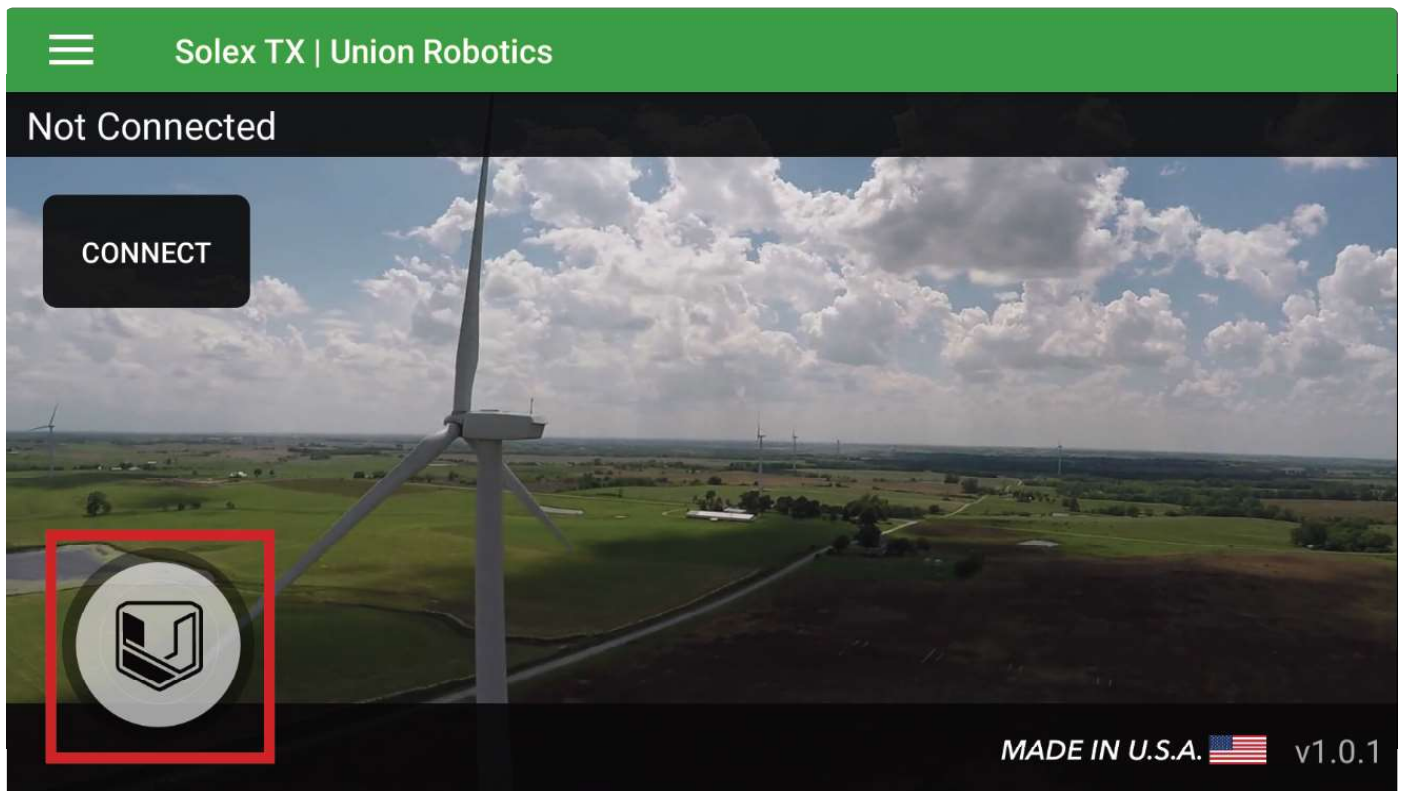


Once connected, the UR/Solex TX app will download the vehicle's parameters



Flight Screen

To view the flight screen, click on the Union Robotics logo at the bottom left side of the screen.



Pre-Flight Checklist Screen

This will take you to the "Pre-Flight Checklist" screen, where you are required to check each item.

WARNING: Physically inspect the aircraft for each item on the Pre-Flight Checklist before checking the box on the screen. Failure to do so could result in aircraft failure or injury.

Pre-Flight Checklist

- ☐ Secure payload
- ☐ Install SD card
- ☒ Check propeller condition
- ☒ Check propellers are tight
- ☐ Verify radio controller battery voltage
- ☐ Verify aircraft battery voltage

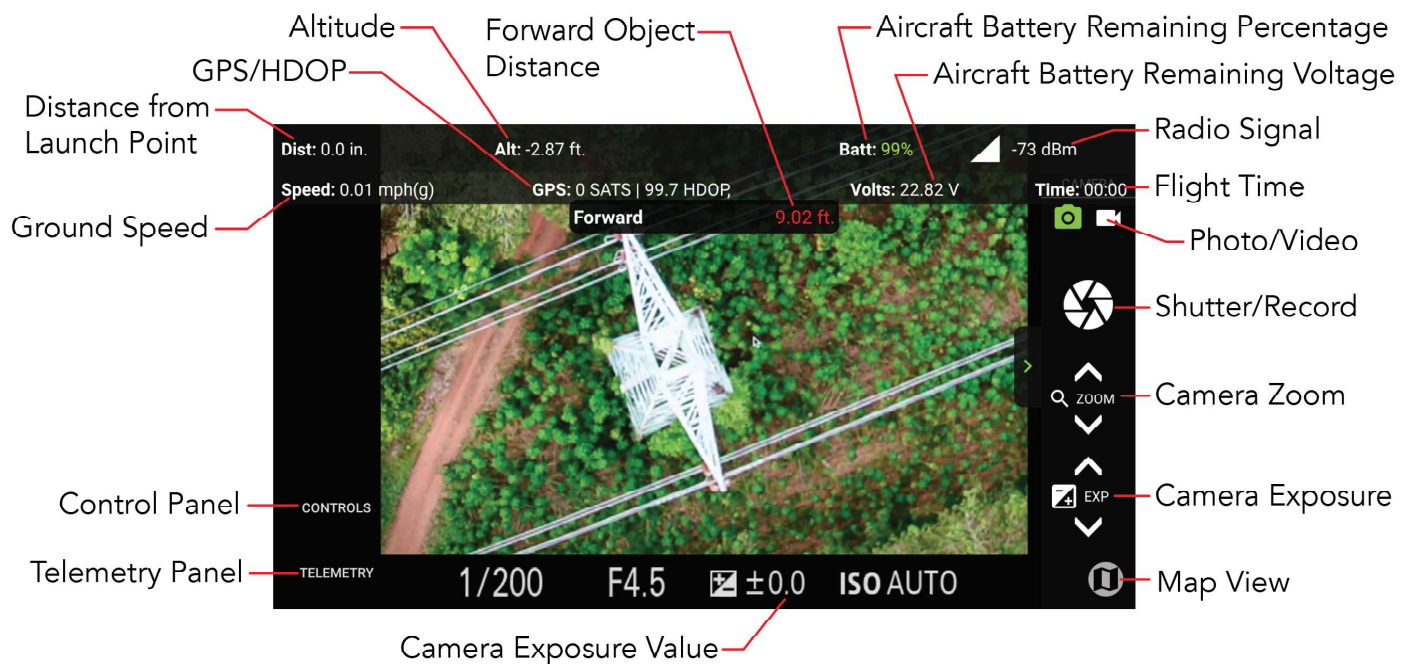
Once all items have been checked on the Pre-Flight Checklist screen, you will be automatically directed to the Verify Controls screen. This screen reminds the pilot to verify all the aircraft controls properly function upon take off before starting the mission. Click **GO!** to be directed to the flight screen

Immediately after takeoff, verify all control functionality.

GO!

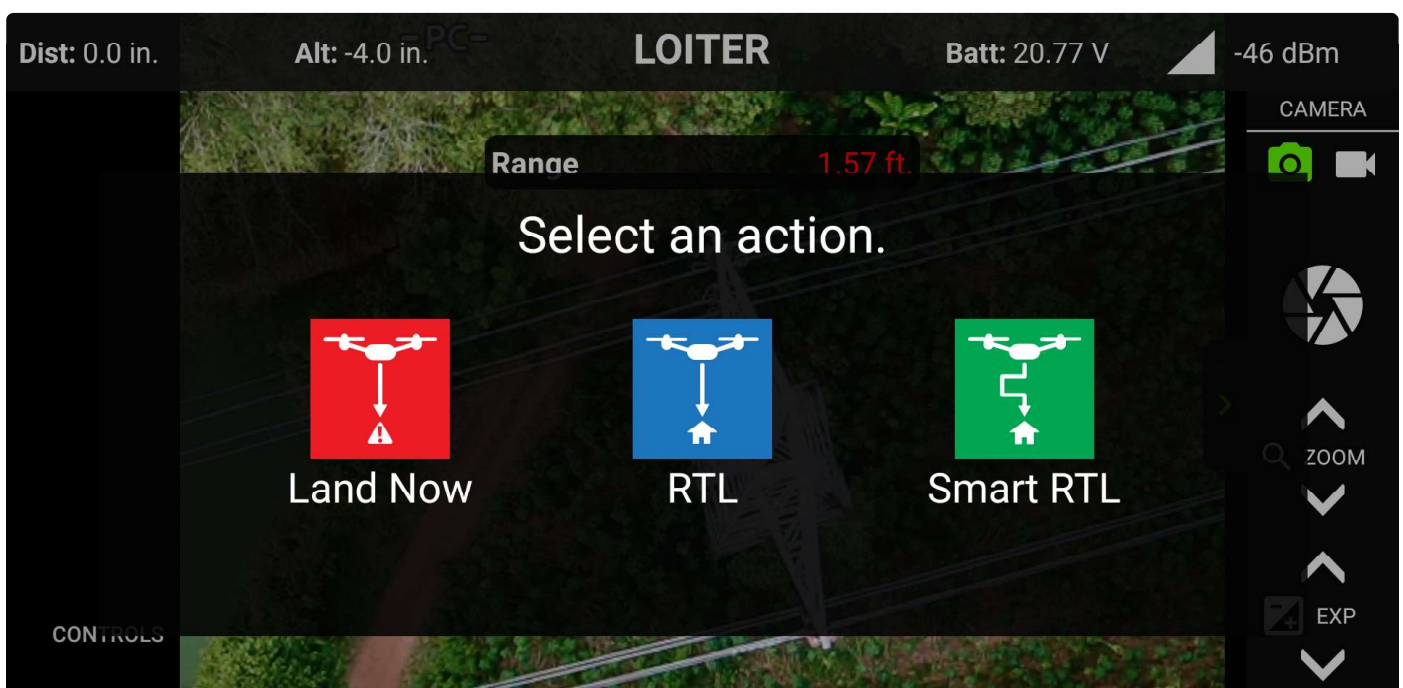
UI Overview

Flight Screen



Feature	Specification
Distance:	Distance the aircraft is in relation to the ground station
Control Panel:	Displays control panel
Gimbal Angle:	The current pitch angle of the camera gimbal
Radio Signal:	Received signal strength indicator
Batt:	Vehicle battery remaining voltage
Telemetry Panel:	Displays vehicle's telemetry
Camera Exposure Value:	Displays camera's current exposure value (with compatible cameras)
Camera Zoom:	Controls camera's zoom (with compatible camera)
Shutter/Record:	Controls camera's shutter and record function (with compatible cameras)
Photo/Video:	Controls camera's photo and video mode (with compatible cameras)
Map View:	Displays map screen
Alt:	Altitude from ground level at ground station

Land

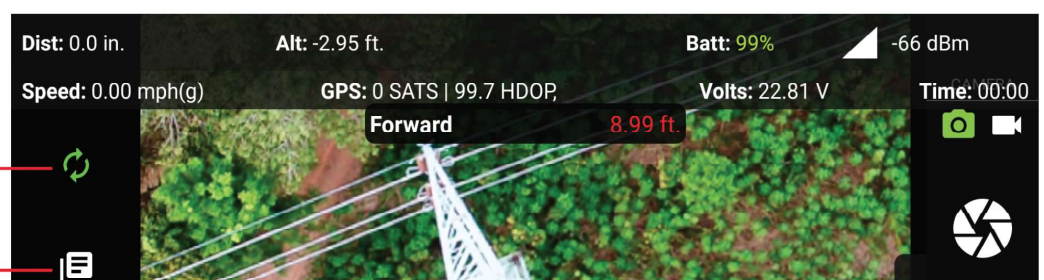


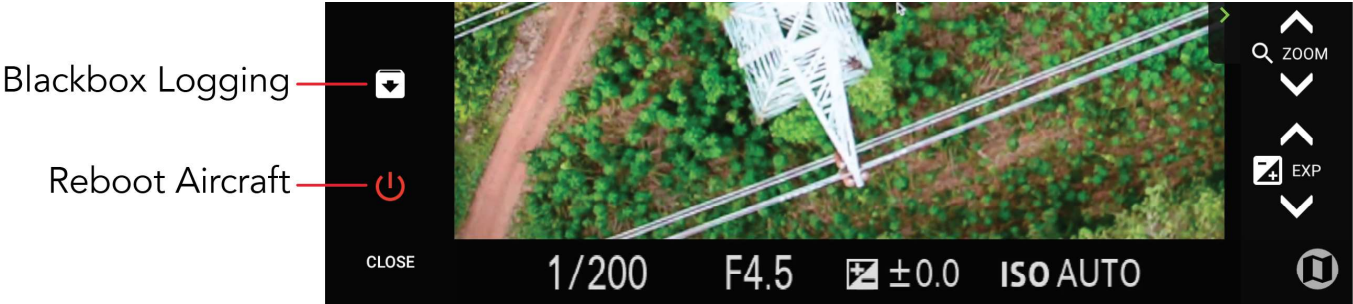
Feature	Specification
Land Now	Land Now will initiate the auto-land function, which will land the aircraft in the current place. The vertical speed at which the Meadowhawk will descend during an auto-land varies as the Meadowhawk approaches the ground. By default, the aircraft will descend at 1m/s until 10 ft above the ground and then it will slow its descent considerably until touchdown.
Return-to-Launch (RTL)	<p>Return-to-Launch Mode will command the Meadowhawk to fly back to the defined launch point. When the Meadowhawk first acquires a GP position, it sets this as the launch point of the flight. Return-to-launch Mode enables the aircraft to follow a straight path when returning to the initial launch point.</p> <p>During an LOS event, RTL followed by auto-land will be initiated automatically. The Meadowhawk will first check its current altitude against the configured RTL altitude. The Meadowhawk will climb to safe-height. Next, the Meadowhawk will fly back to the launch position set at the initial GPS position.</p>
Smart Return-to-Launch (SmartRTL)	When switched into Smart RTL, like regular RTL, the vehicle will attempt to return home. The “Smart” part of this mode is that it will retrace a safe path home instead of returning directly home. This can be useful if there are obstacles between the vehicle and the home position.

Control Panel

Vehicle Arm/Disarm

Mavlink Viewer

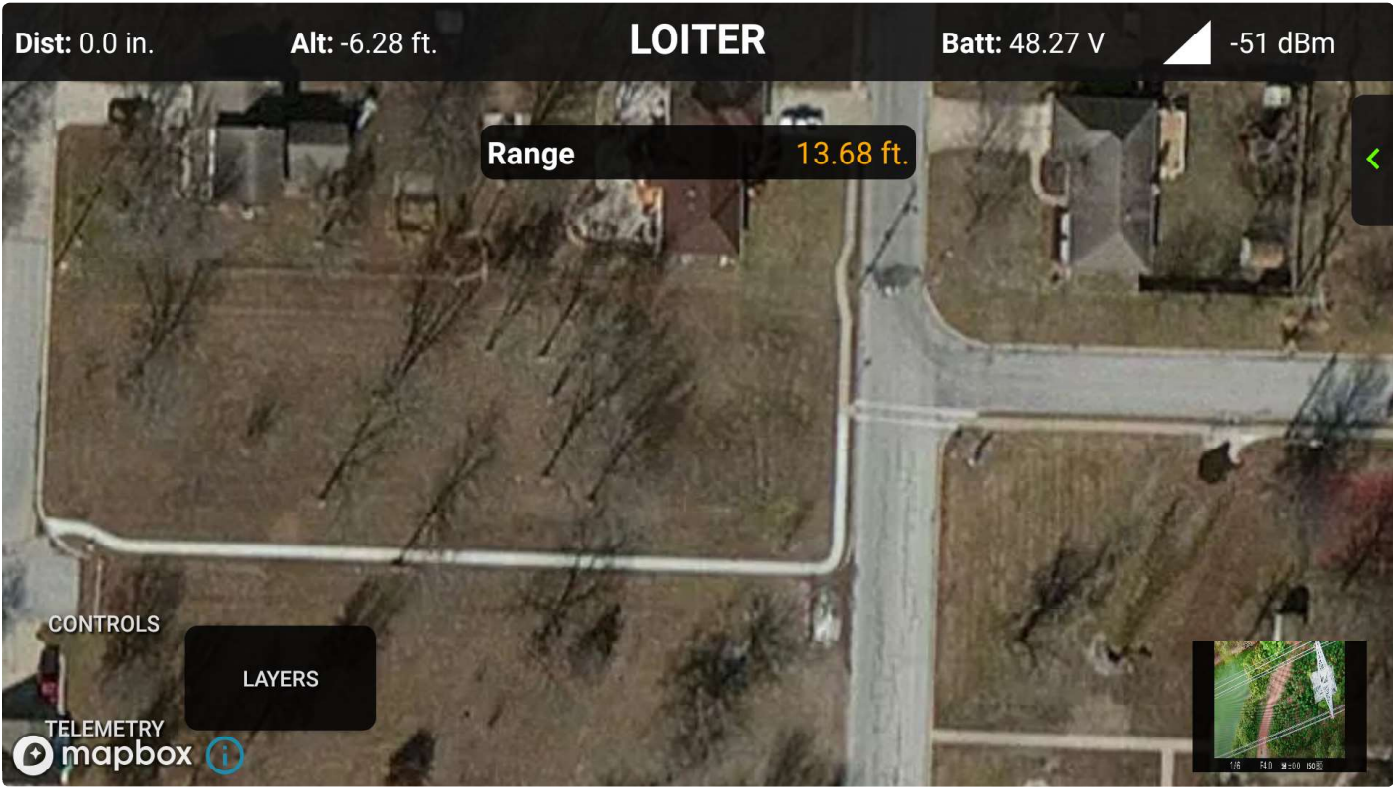




Feature	Specification
Arm/Disarm:	Arm and Disarm the vehicle
Mavlink Viewer:	Live view of the Mavlink messages
Blackbox Logging:	Turn on and off the redundant blackbox logging to the ground station
Reboot:	Reboot the vehicle's autopilot

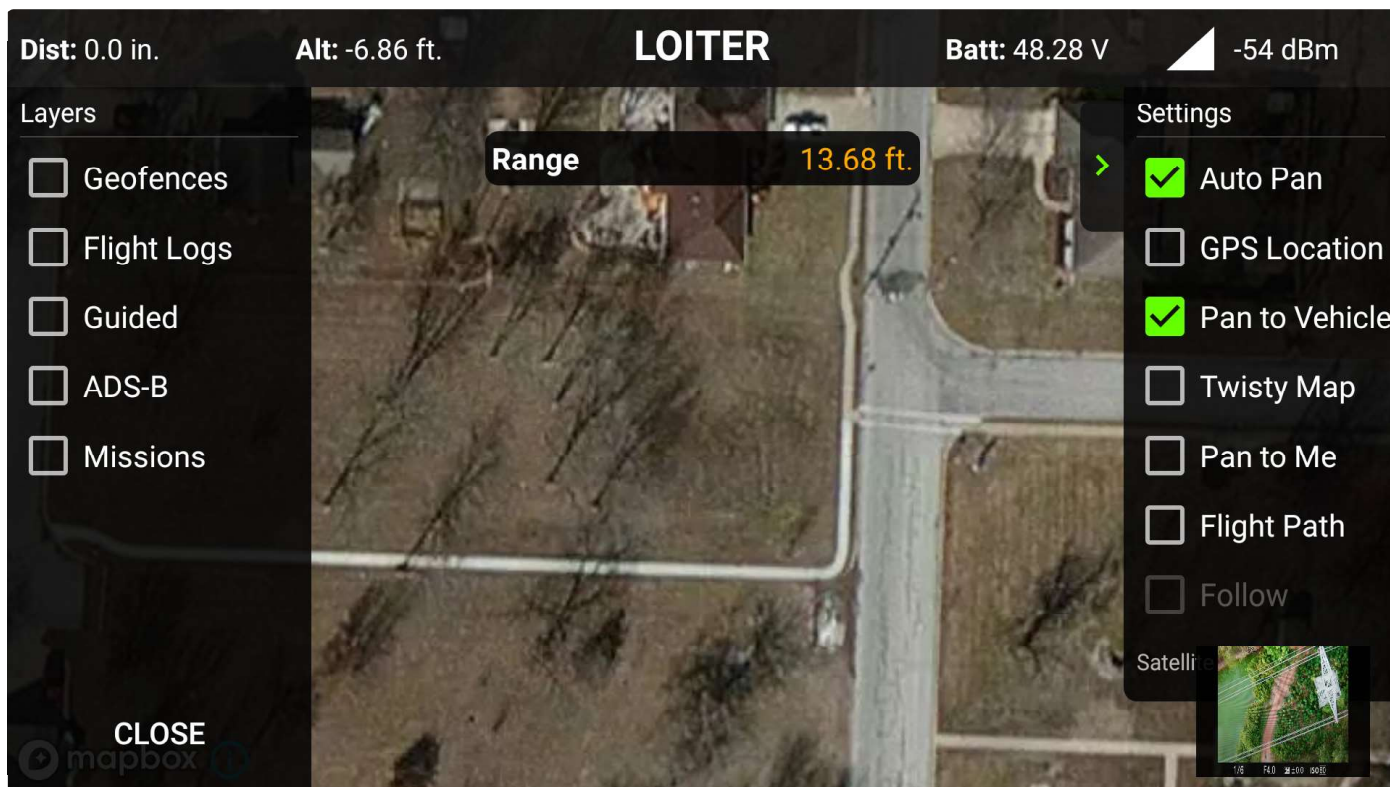
Map View

Displays an overhead map view. This view can be used for mapping autonomous missions.



Layers

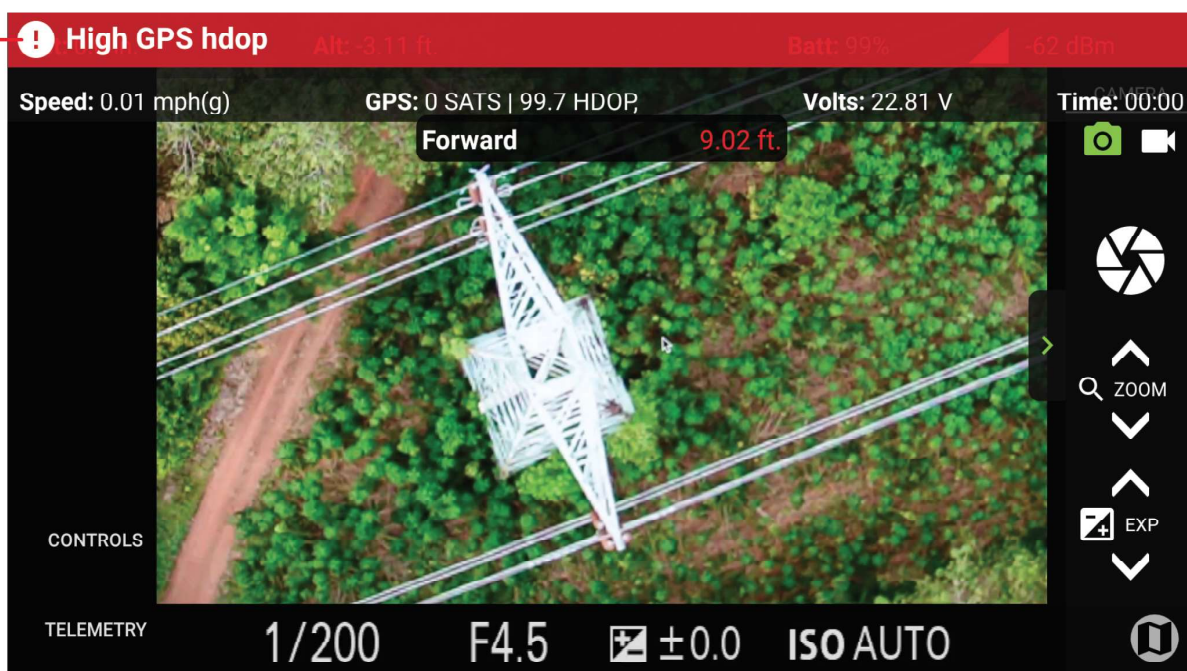
When clicking on the layers button on the Map View, the layers option menu will display. The options will overlay on the map.



Alert Indications

The DataLink has many alarm, warning and failure indicators. All alarm, warning and failure indicators will be displayed in a red bar across the top of the ground station screen.

Alerts

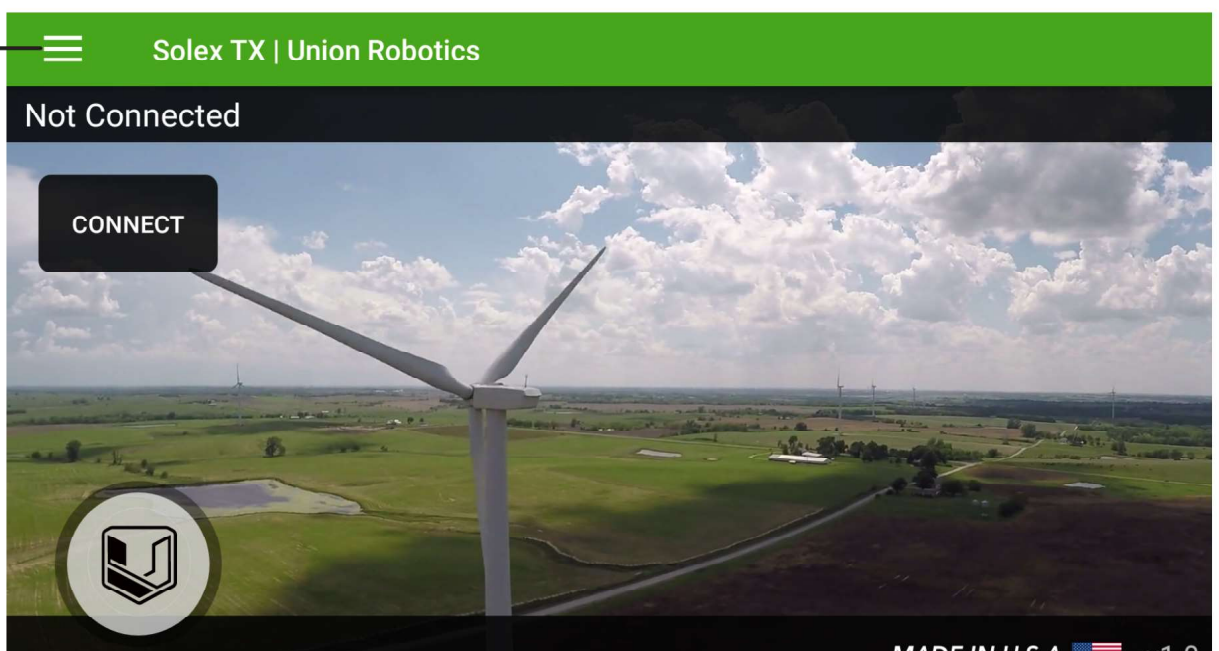


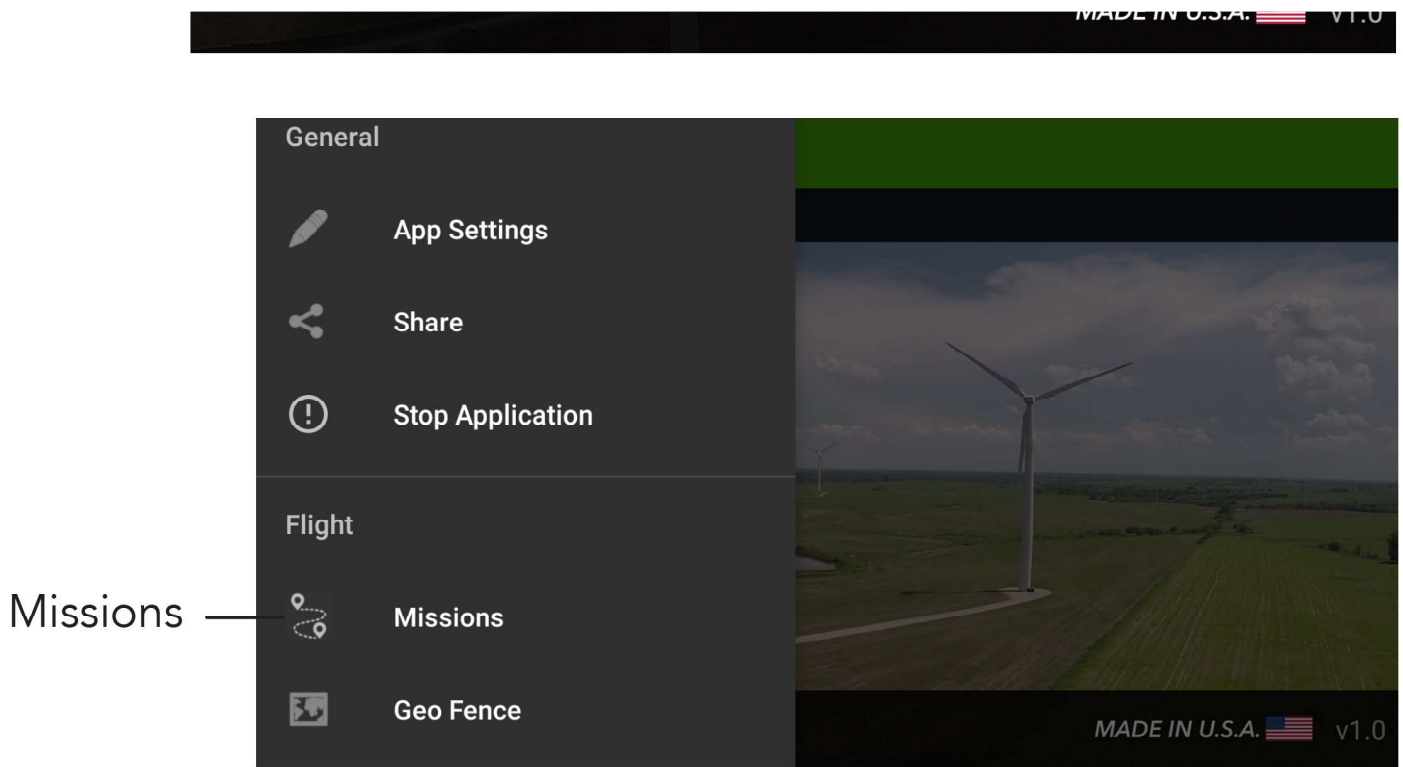
Alert	Specification
Low Battery:	Battery failsafe has triggered, should land immediately
No GPS Fix:	Warns pilot that the GPS can not get a satellite fix
Telemetry Lost:	Warns pilot that the telemetry signal has been lost
High GPS HDOP:	GPS signal quality is insufficient
Throttle Below Failsafe:	Ground controller has lost connection to the vehicle
Gyro Calibration Failed:	Failed to calibrate the IMUs on the vehicle
Mode Not Armable:	Operator is attempting to arm the vehicle in a mode which does not allow arming
Rotor Not Spinning:	Autopilot has detected an error attempting to run one or more motors
Vehicle is Leaning:	Vehicle orientation is not suitable for takeoff
Throttle Too High:	Current throttle setting is too high to arm safely (could result in spontaneous takeoff)
Safety Switch:	Operator attempted to arm, but hardware arm-safe switch is engaged
Compass Calibration Running:	Cannot arm, currently calibrating the compass
RC Not Calibrated:	Ground control radio has not been calibrated for use with the vehicle
Barometer Not Healthy:	Barometer is experiencing an error
Compass Not Healthy:	Compass is experiencing an error
Compass Not Calibrated:	Compass requires calibration
Compass Offsets Too High:	Compass calibration has resulted in unusable offsets
Check Magnetic Field:	Vehicle is near a metallic or magnetic object which is interfering with compass operation
Inconsistent Compass:	Compass readings are determined to be erroneous

Missions

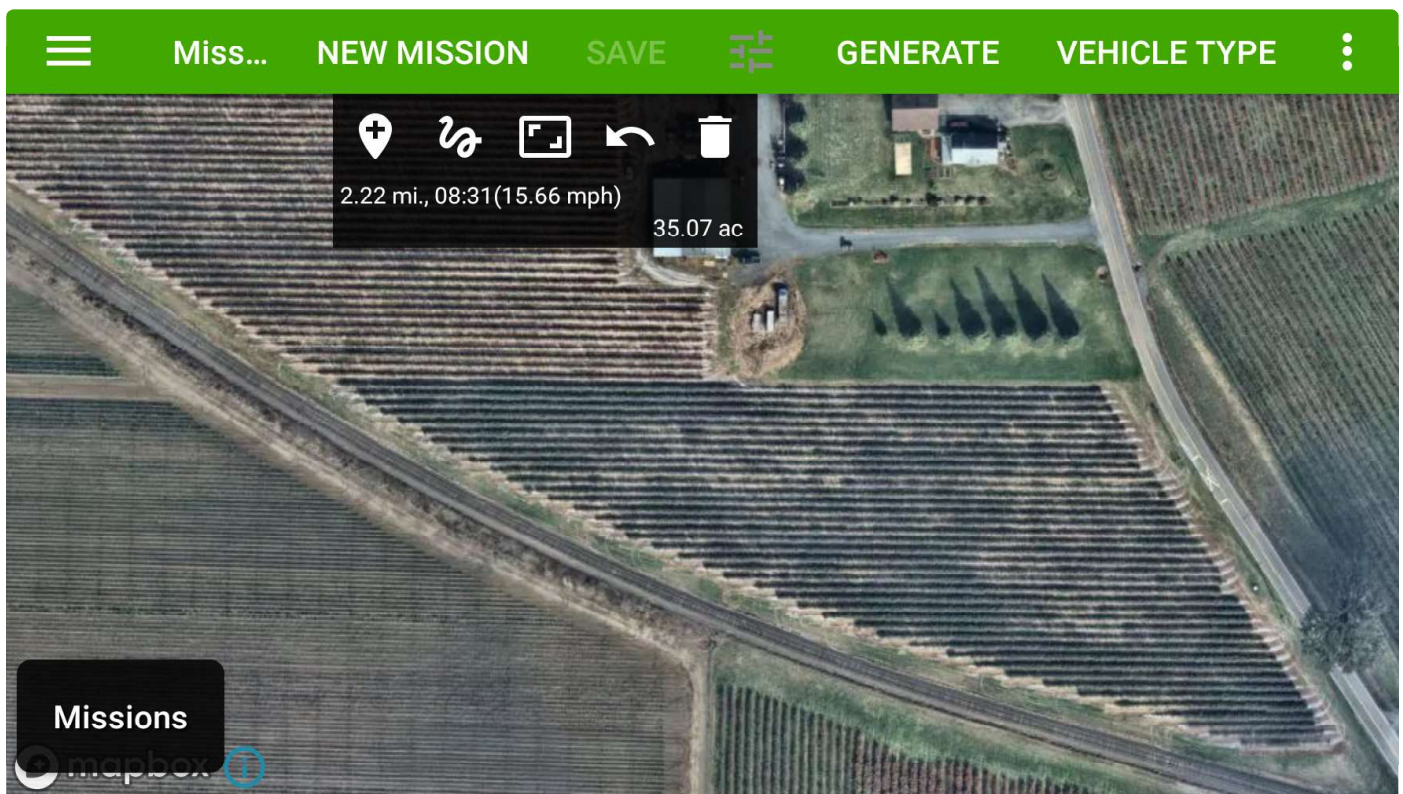
The primary way to create and edit missions is in the Mission Editor, accessible from the main menu. The list of Missions you've created is seen from the Mission list (which appears when you click the "Missions" button on the left). The toolbar at the top lets you add or delete waypoints to/from a mission, or undo recent changes you've made.

Menu



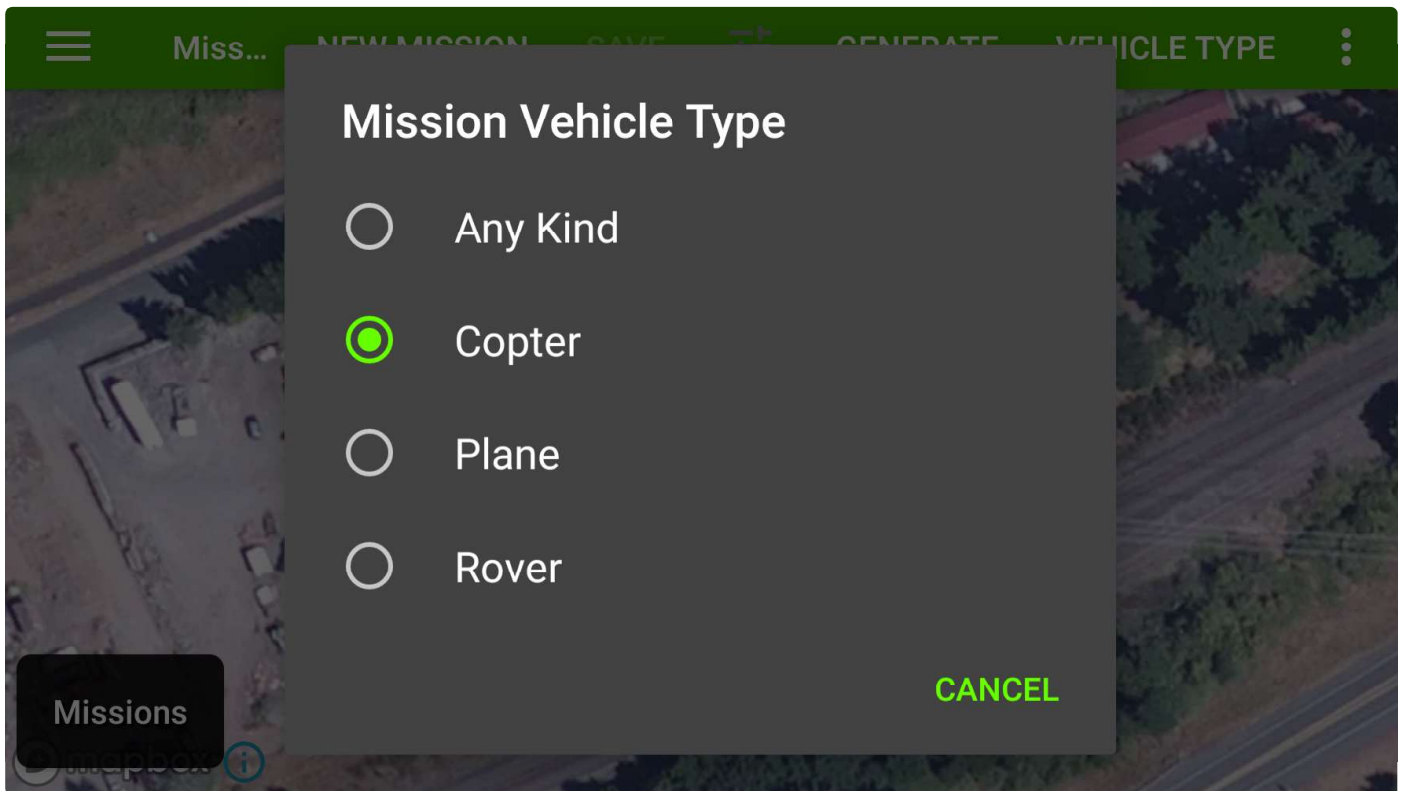


When the mission editor is opened, it should be positioned at your current location on the map. If you have a specific place you want to create a mission at, then select "Search Address" from the menu. (You'll need an internet connection for this.) Type in the address, ZIP code, etc. you're interested in, and it will show you a list of addresses matching what you typed. Pick one, and the map will pan to that location. You can also search for a lat/lng directly by typing it into the search field.



Mission Vehicle Type

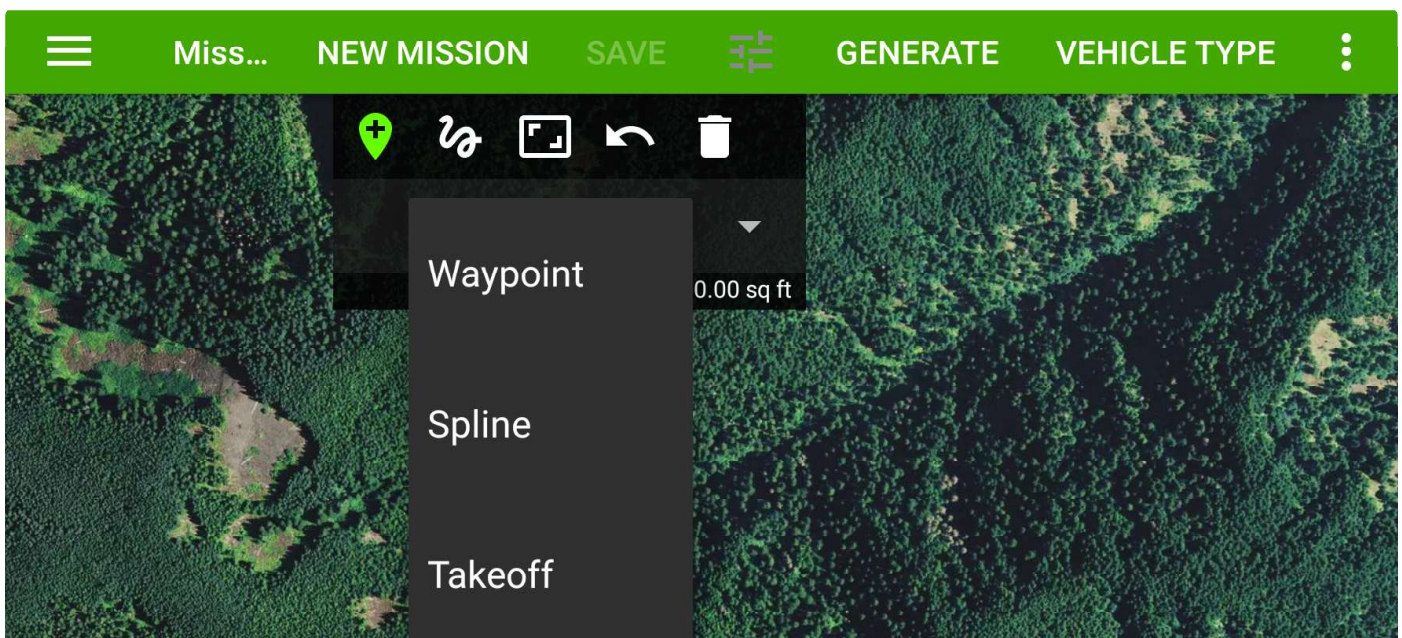
Click the **VEHICLE TYPE** button in the top right of the missions screen. Select the desired vehicle you would like to run a mission with.

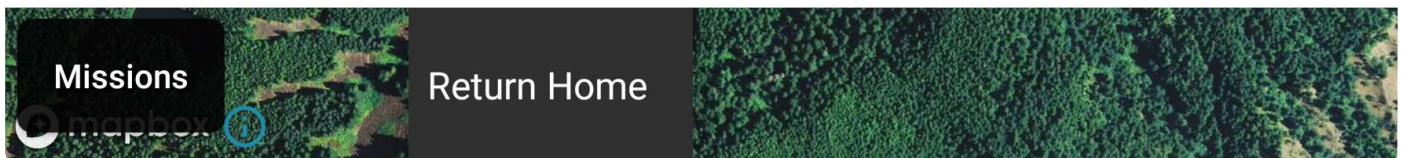


Mission Types

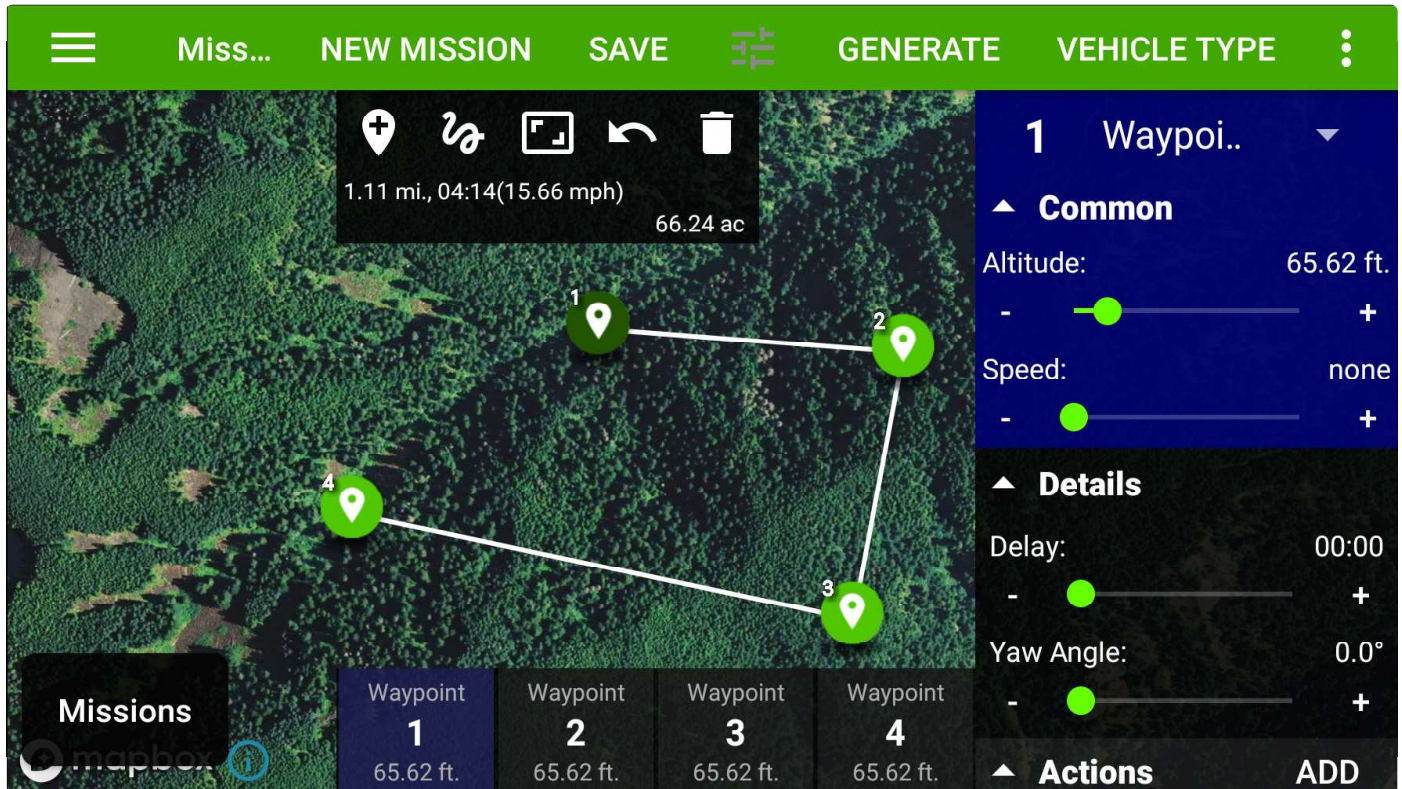
Waypoint Missions

To create a mission using waypoints, click the **+** marker in the toolbar, which will then turn green. To the right on the toolbar, there will be a drop-down list of waypoint types that you can drop, choose Waypoint.





To add waypoints, click on the map where you want the aircraft to fly, starting with the place of launch. At each point, a marker will be placed on the map.



To change settings on each waypoint, click either the waypoint marker on the map, or the item in the horizontal list at the bottom. A panel will appear on the right of the screen with slider attributes. These are attributes of the waypoint that can be edited. The top sliders are common to most waypoints (i.e Altitude, speed). The next set (under "Details") is the set of attributes specific to that type of waypoint.

Takeoff Point

To change the first waypoint to a Takeoff, click the top of the panel, and it will drop down a list of items. Click **Takeoff** in the list. The panel's contents will change to show just the relevant attributes for a Takeoff. The waypoint also disappears off of the map, because a Takeoff doesn't really have a defined point; it's just the location your vehicle is sitting when it takes off.

